



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,224	11/08/2001	Frank Kopf	1813	5567

7590 11/26/2003
Striker Striker & Stenby
103 East Neck Road
Huntington, NY 11743

EXAMINER

FLANDRO, RYAN M

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SW

Office Action Summary	Application No. 10/009,224	Applicant(s) KOPF, FRANK	
	Examiner Ryan M Flandro	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/4/03, 8/7/03, and 9/2/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. In view of Applicant's Amendments submitted 04 June 2003, 07 August 2003, and 02 September 2003, the objections to the specification are hereby withdrawn.

Claim Objections

3. Claim 14 is objected to because of the following informalities: the word "th" in line 3 of the claim should be changed to --the--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. Claims 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Delf et al (US 2,773,365) (Delf).
 - a. Claim 13. Delf clearly shows and discloses a device for securing an add-on part **14/SA** (see column 2 lines 32-36) to a substantially smooth drive shaft **S** (see figure 1; column 2 lines 13-15), having a slaving element **10**, which is seated in a manner fixed against relative rotation on the drive shaft **S** and transmits a rotary motion from the drive shaft **S** to the add-on part **14/SA**, and having a spring element (**comprised of elements 37, 25 and 36**), which axially secures the add-on part **14/SA** on the drive shaft **S**, characterized in that the slaving element **10** penetrates the add-on part **14/SA**, and the

spring element **37/25/36** is braced directly on the slaving element **10 (@40)** and on the add-on part **14/SA** and thus axially fixes the add-on part **14/SA** on the drive shaft **S** (see figures 1-3; see generally columns 2-4).

b. Claim 14. Delf further shows and discloses the add-on part **14/SA** is clamped between the spring element **37/25/36** and a portion of the slaving element **10** (see figures 2 and 3).

c. Claim 16. Delf also shows the slaving element **10** has a collarlike widening **40**, on which the spring element **37/25/36** is braced (see figures 2 and 3).

d. Claim 17. Delf also shows that the add-on part **14/SA** has recesses **16** through which the slaving element **10** can be passed with its collarlike widening **40** (see especially figure 2).

e. Claim 18. Delf further shows and discloses that the add-on part **14/SA** has positive engagement with the slaving element **10** and in particular embraces it (see figure 2). The Examiner notes that the term “positive engagement” is construed broadly to include engagement via other elements.

f. Claim 19. Delf further shows and discloses that the slaving element **10** has a platelike widening **15** of its diameter, at which the add-on part **14/SA** is braced (via elements **21** and **35**) (see figures 2 and 3).

g. Claim 20. Delf also shows and discloses that in the platelike widening **15**, the slaving element **10** has recesses (**backside of lugs 17**) corresponding to the location of the collarlike widening **40** (see figure 2).

- h. Claim 22. Delf also shows and discloses that the spring element **37/25/36** is secured on the add-on part **14/SA** against later twisting by means of a positioning pin (portion of **36** inserted into **32**) (see figures 2 and 3).
- i. Claim 23. Delf further shows and discloses that the add-on part **14/SA** to be secured is a vane wheel of a fan (see figures 1 and 2; column 1 lines 15-23 and column 2 lines 21-36).
- j. Claim 24. Delf shows the slaving element **14/SA** press-fitted onto the drive shaft **S** (see figures 1 and 2).
- k. Claim 25. Delf clearly shows and discloses a device for securing an add-on part **14/SA** (see column 2 lines 32-36) to a substantially smooth drive shaft **S** (see figure 1; column 2 lines 13-15), having a slaving element **10**, which is seated in a manner fixed against relative rotation on the drive shaft **S** and transmits a rotary motion from the drive shaft **S** to the add-on part **14/SA**, and having a spring element **37/25/36**, which axially secures the add-on part **14/SA** on the drive shaft **S**, characterized in that the slaving element **10** penetrates the add-on part **14/SA**, and the spring element **37/25/36** is braced on the slaving element **10** (**@40**) and on the add-on part **14/SA** and thus axially fixes the add-on part **14/SA** on the drive shaft **S**, and also directly abuts against the slaving element **10** and against the add-on part **14/SA** (see figures 1-3; see generally columns 2-4).

Claim Rejections - 35 USC § 103

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delf, as applied to claim 13 above. As interpreted above, Delf does not disclose the spring element being embodied

Art Unit: 3679

in one piece. Nevertheless, it has been held that one-piece construction, in place of separate elements fastened together, is a design consideration within the skill of the art. In re Kohno, 391 F.2d 959, 157 USPQ 275 (CCPA 1968); In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the spring being of one piece since such construction is well known in the art.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delf, as applied to claim 13 above, in view of Savage. Delf lacks disclosure of the spring element **37/25/36** being a circular cup spring that is open on one side. Savage, however, teaches spring element **46** being a circular cup spring that is open on one side to provide compressive axial loading in a fan blade assembly (see figure 1 – the spring element of Savage is actually open on two sides because an aperture runs through the middle of the spring; see also column 2 line 65). Inasmuch as the references (Delf and Savage) disclose these elements as art recognized equivalents, it would have been obvious to one of ordinary skill in the art to substitute one for the other. In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3679

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to devices for fixing subassemblies to essentially smooth drive shafts:

U.S. Patent 6,527,516 to Crevel (see especially figures 1, 2, and 6). Crevel, however, has no good priority date.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M Flandro whose telephone number is (703) 305-6952. The examiner can normally be reached on 8:30am - 5:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Art Unit: 3679

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

RMF

November 15, 2003



Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670